

291  
8.4

p438 13-21 odd 29, ~~31~~, 35

13. C(0,0)

$$a=4$$

$$c=3$$

$$16 = 9 + b^2$$

$$7 = b^2$$

$$\frac{x^2}{16} + \frac{y^2}{7} = 1$$

15. C(-2,0)

$$a=4$$

$$c=2\sqrt{3}$$

$$16 = b^2 + (2\sqrt{3})^2$$

$$12$$

$$4 = b^2$$

$$\frac{(x+2)^2}{4} + \frac{y^2}{16} = 1$$

17. <sup>Major</sup> (2,12)(2,-4)

C(2,4)

$$a=8$$

$$\cancel{64} = 4 + c^2$$

$$x = c^2$$

<sup>minor</sup>

(4,4)(0,4)

$$b=2$$

$$\frac{(x-2)^2}{4} + \frac{(y-4)^2}{64} = 1$$

19. 2a=16

$$a=8$$

<sup>y</sup> 2b=9

$$b=4.5$$

C(5,4)

$$\frac{(x-5)^2}{64} + \frac{(y-4)^2}{81/4} = 1$$

<sup>Minor</sup>

21. (0,5)

(0,-5)

<sup>F</sup>

(12,0)

(-12,0)

C(0,0)

$$b=5$$

$$c=12$$

$$a^2 = 5^2 + 12^2$$

$$169$$

$$\frac{x^2}{169} + \frac{y^2}{25} = 1$$

$$29. \frac{(x+8)^2}{144} + \frac{(y-2)^2}{81} = 1$$

graphs  
on next  
page

$$C(-8, 2)$$

$$a=12$$

$$144 = 81 + c^2$$

$$\text{major axis} = 24$$

$$b=9$$

$$\frac{-81}{63} = c^2$$

$$\text{minor axis} = 18$$

$$c = 3\sqrt{5}$$

$$F(-8+3\sqrt{5}, 2)$$

$$F(-8-3\sqrt{5}, 2)$$

$$35 \quad 3x^2 + 18x + y^2 - 2y + 4 = 0$$

$$3(x^2 + 6x + 9) + y^2 - 2y + 1 = -4 + 27 + 1$$

$$3(x+3)^2 + (y-1)^2 = 24$$

$$\frac{(x+3)^2}{8} + \frac{(y-1)^2}{24} = 1$$

$$C(-3, 1)$$

$$a = 2\sqrt{6}$$

$$\text{major axis} = 4\sqrt{6}$$

$$24 = 8 + c^2$$

$$b = 2\sqrt{2}$$

$$\text{minor axis} = 4\sqrt{2}$$

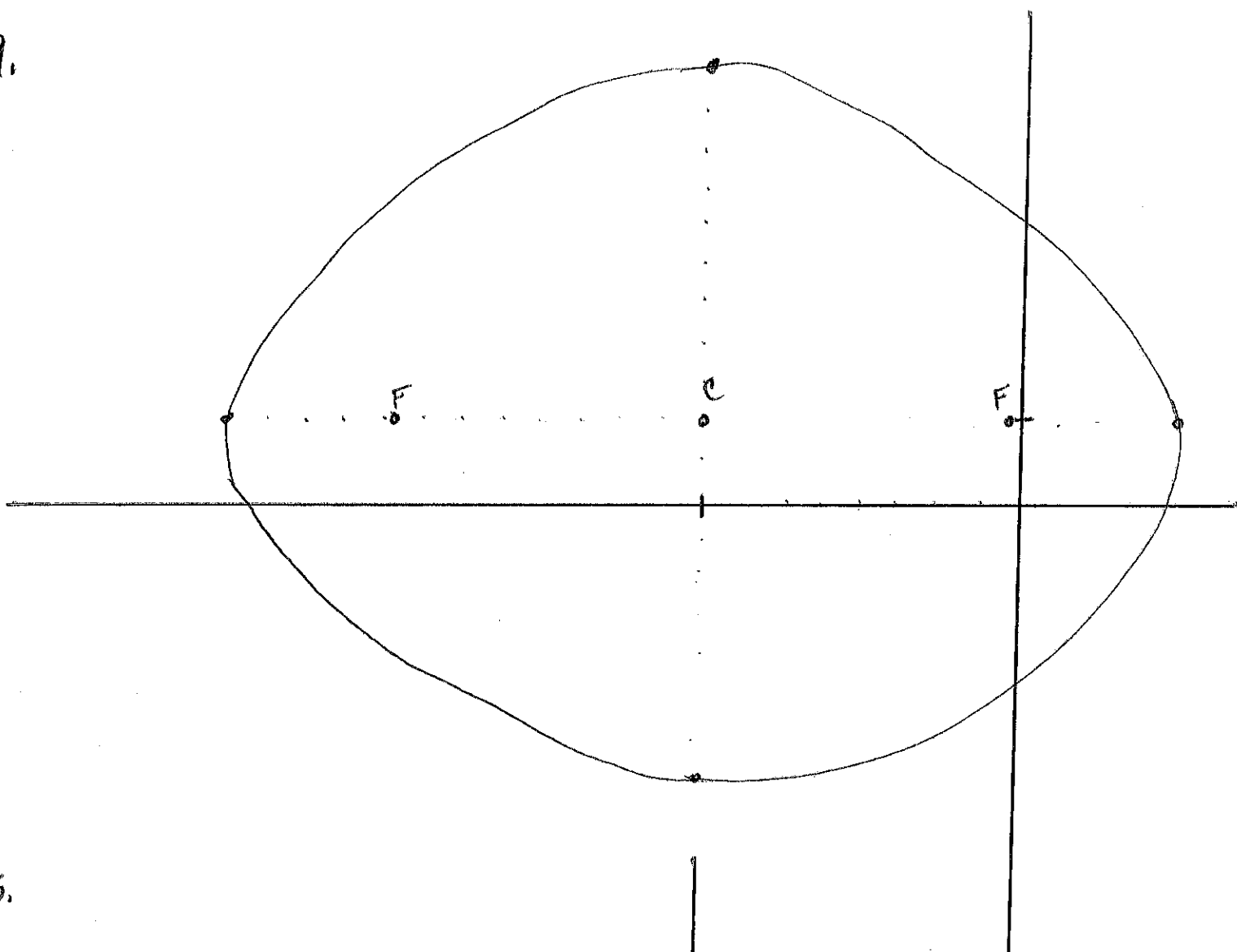
$$16 = c^2$$

$$c = 4$$

$$F(-3, 5)$$

$$F(-3, -3)$$

29.



35.

